

ASTM 1554, 55KSI, 89" WITH 7" BENT HOOK

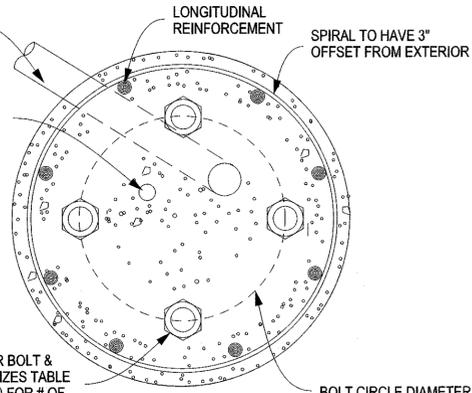
ANCHOR BOLT ASSEMBLY

NOT TO SCALE

CONDUIT (NO. AND SIZE AS REQ'D ON PLANS). PROVIDE ADDITIONAL 1-3" SPARE CONDUIT ON ALL FOUNDATIONS. TURN UP CONDUIT INTO NEAREST JUNCTION BOX.

GROUND ROD INSTALLED WITH SPACE FOR INSTALLATION OF CLAMP, AND GROUND WIRE. GROUND WIRE TO BE CONNECTED TO STEEL POLE OR MAST ARM.

SEE ANCHOR BOLT & TEMPLATE SIZES TABLE (THIS SHEET) FOR # OF BOLTS REQUIRED



FOUNDATION PLAN

NOT TO SCALE

FOUNDATION SIZE SELECTION TABLE												
Mast Arm Length(s) (ft)	Bending Moment (ft-lb)	Torsion (ft-lb)	Shear (lb)	Axial Force (lb)	Foundation Size Selection (diameter in inches, depth in feet)							
					Zone 1 (Diameter/Depth)		Zone 2+ (Diameter/Depth)		Zone 3+ (Diameter/Depth)		Zone 4 (Diameter/Depth)	
55	125,120	121,100	5,500	5,862	*	*	42	18	36	14	*	*
60	141,805	128,940	5,930	6,561	*	*	42	19	36	15	*	*
65	161,259	150,480	6,130	6,965	*	*	48	17	36	16	*	*
70	182,103	169,590	6,620	7,377	*	*	48	19	36	17	*	*
50 & 35	142,210	101,630	5,860	7,572	54	18	36	20	36	13	*	*
50 & 40	147,540	101,610	5,860	7,798	54	18	36	20	36	13	*	*
55 & 40	159,408	119,900	5,910	8,195	*	*	42	18	36	14	*	*
55 & 45	165,981	119,870	5,910	8,425	*	*	42	18	36	14	*	*

*: Special Design Foundation Required

ANCHOR BOLT & TEMPLATE SIZE TABLE

DRILLED SHAFT DIA	REINFORCING STEEL		ANCHOR BOLT DESIGN		
	VERT BARS	SPIRAL SPACING	# OF ANCHOR BOLTS	ANCHOR BOLT DIA	BOLT CIRCLE DIA
36"	12 - #10	#3 AT 6" < 24" DEPTH #3 AT 12" > 24" DEPTH	4	2 1/4"	24"
42"	17 - #10	#3 AT 6" < 24" DEPTH #3 AT 12" > 24" DEPTH	6	2 1/4"	30"
54"	28 - #10	#3 AT 6" < 24" DEPTH #3 AT 12" > 24" DEPTH	6	2 1/4"	30"

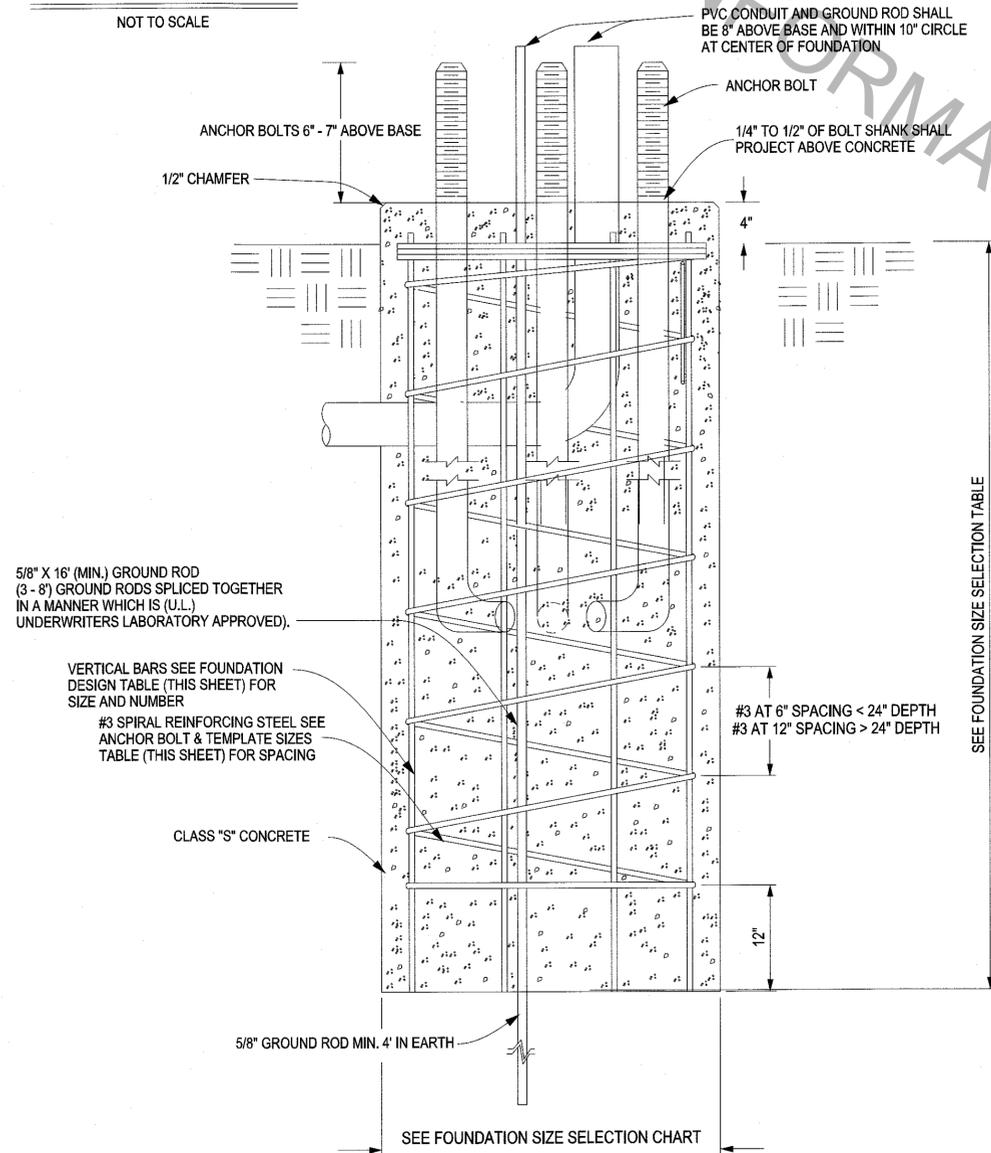
GENERAL NOTES:

1. THREADS FOR ANCHOR BOLTS AND NUTS SHALL BE ROLLED OR CUT THREADS.
2. THE CONTRACTOR SHALL STAKE THE LOCATION OF EACH POLE FOUNDATION AND NOTIFY THE PROJECT ENGINEER FOR CONCURRENCE IN THE LOCATION BEFORE PROCEEDING WITH THE INSTALLATION OF THE POLE FOUNDATION.
3. ONCE THE POLE FOUNDATION IS INSTALLED, MAST ARM LENGTHS SPECIFIED ON PLANS ARE TO BE VERIFIED BEFORE ORDERING. IF A TIME EXTENSION IS NEEDED, IT SHALL BE AT THE DISCRETION OF THE PROJECT ENGINEER TO GRANT THE EXTENSION.
4. CONDUIT SHALL BE INSTALLED ACCORDING TO PLANS. CONDUIT SHALL BE CENTERED IN THE FOUNDATION WITH EVEN SPACING.
5. ALL SPARE CONDUIT IN FOUNDATIONS SHALL BE STUBBED OUT 24" BELOW GRADE AND BROUGHT INTO JUNCTION BOX.
6. TOP OF BASE SHALL BE ROUND WITH CHAMFERED EDGE.
7. SERVICE CONDUIT SHALL BE 2" DIA. SCH. 80 PVC.
8. USE A GROUND ROD CLAMP TO ATTACH THE #6 AWG BARE GROUND WIRE ONTO THE GROUND ROD AND THE OTHER END TO BE CONNECTED TO THE POLE.
9. ALL GROUND RODS, REGARDLESS OF FOUNDATION SIZE SHALL PROTRUDE THROUGH THE FOUNDATION AND A MINIMUM OF 4" SHALL BE EMBEDDED INTO THE EARTH.

SPECIAL DESIGN FOUNDATION NOTES:

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1. FOUNDATIONS FOR MAST ARM LENGTHS REQUIRING A SPECIAL DESIGN FOUNDATION SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE AASTHO LRFD BRIDGE DESIGN SPECIFICATIONS.
2. FOUNDATION LOADS FOR THE CORRESPONDING MAST ARM LENGTH PROVIDED IN THE FOUNDATION SIZE SELECTION TABLE SHALL BE USED TO DESIGN THE FOUNDATION SIZE AND DEPTH. THE LOADS IN THE TABLE WERE PROVIDED BY THE MAST ARM MANUFACTURERS AND ARE BASED ON A 25-YEAR RECURRENCE INTERVAL AND A WIND SPEED OF 110 MPH. THESE LOADS SHALL ONLY BE USED FOR DESIGN OF THE FOUNDATION.
3. WHEN A SPECIAL DESIGN FOUNDATION IS REQUIRED THE FOUNDATION DESIGN SHALL BE BASED ON SITE SPECIFIC SUBSURFACE INFORMATION. IF SITE SPECIFIC DATA IS NOT MADE AVAILABLE BY DOTD THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING SITE SPECIFIC SUBSURFACE INFORMATION.
4. DESIGN CALCULATIONS FOR THE FOUNDATION SHALL BE SUBMITTED TO THE TRAFFIC ENGINEERING SECTION FOR REVIEW.



FOUNDATION SECTION

NOT TO SCALE



TRAFFIC SIGNAL STANDARD DETAILS
55' SINGLE, 50'X35' DUAL AND OVER MAST ARM FOUNDATION

DESIGNED: S. MCCARROLL
CHECKED: D. LORIO
DATE: 7/6/2016

TRAFFIC ENGINEERING